

C2
concl
said spacer means being located in relation to the space between
respective electrical drive means.

Please add new claim 126, as follows:

C3
126. The display of claim 106, said picture elements being arranged in side by side relation, the electrical drive means being at least partly in the space between adjacent picture elements, and said separator being in said space overlying the electrical drive means..

Marked-up versions of the above amended claims are included in Appendix A attached hereto.

REMARKS

Favorable reconsideration of this application is respectfully requested.

This application includes claims 103-126. A restriction requirement was made. Applicant's undersigned attorney confirms the election with traverse of claims 106 and 114-125. Claim 106 has been amended to independent form, and claim 1, on which claim 106 had depended, has been canceled. Claim 126 has been added.

Allowance of claims 123-125 is noted with appreciation.

Indication of allowability of claims 116, 12 and 121 also is noted with appreciation. These claims have not been amended to independent form at present because for the reasons expressed below, it is believed that independent claim 114 is allowable.

An abstract is filed herewith, as Examiner Tran required.

Withdrawal of the objection to the disclosure under 35 CFR 1.71 respectfully is requested for the following reasons. It is true that the specification uses the term "mask" in several different ways; and it also is true that in each case there is a clarifying word or context that clearly indicates the meaning of the term. For example, a mask may be something that hides or blocks or a mask may be something that distinguishes or separates. In the field of copyright law there are mask works, such as devices that are used to determine where light will be placed and where light will be blocked in the process of making an integrated circuit. In connection with light projection, as in a Schlieren projector system, a mask may block transmission of some light and allow some light to pass through an aperture in the mask. In photocopying processes, masking is used to block out part of a document so only a different part would be photocopied. And, "masking tape" is used to protect one surface while applying paint. A mask may be a means used to conceal or to hide something. A mask may be a cosmetic preparation for the skin of the face to cause a tightening as it dries.

Turning to the specification, the term "mask" is used primarily in three ways. One way the term "mask" is used, is at page 1, line 9 where a "mask or separator between respective picture elements" is described as an aspect of the invention. The mask provides separation or divides between respective picture elements (page 5, line 18-19).

A second way the term "mask" is used is as a "plate or mask" having a small aperture on which light is focused (page 2, lines 15-16) in a projector. A reverse use of a "mask" is in a Schlieren projector in which transmitted light, e.g., unscattered light, is blocked by a mask in the light path.

A third way the term "mask" is used is analogous to the use in a mask work, namely, to transmit some light and to block some light with respect to the "blend" described at page 19, lines 25-28.

Thus, it is believed that the specification does meet the requirements of 37 CFR 1.71 and 35 U.S.C. §112 in providing a full, clear, precise and exact description of the invention, including how to make the invention and how to use the invention.

However, if Examiner Tran feels that some clarifying language should be added to the specification, applicant's undersigned attorney would be glad to discuss suggestions That Examiner Tran might propose.

Withdrawal of the rejection of claims 117-119 under 35 U.S.C. §112, second paragraph, is respectfully requested. These claims 117-119 have been amended to clarify the respective ranges set forth therein. If Examiner Tran feels these claims still are indefinite, applicant's undersigned attorney would be glad to discuss any proposals that Examiner Tran may have to clarify such claims.

Withdrawal of the rejection of claims 106, 114, 115 and 122 under 35 U.S.C. §102(b) in view of Takizawa US Patent 5,260,815, respectfully is requested for the following reasons.

Claim 106 points out "a separator integral with and between respective picture elements...". There is no integral separator in Takizawa. There is a spacer 41 shown in Fig. 12 of Takizawa; but that spacer is not integral with any picture elements. There is a resin 23 used in Takizawa, but that resin retains the liquid crystal 22 in respective volumes to make up PDLC (polymer dispersed liquid crystal), also known as NCAP (nematic curvilinear aligned phase) material. But, the volumes of liquid crystal 22 in Takizawa do not individually make up a picture element such that the resin 23 would be considered an integral separator between picture elements. Indeed, as is illustrated in Figs. 3A-3D of Takizawa, the light path through the illustrated device goes through a number of volumes of liquid crystal and resin without there being any separation between respective picture elements by the resin 23.

New claim 126 additionally points out that the picture elements are arranged in side by side relation, the electrical drive, e.g., conductive paths on a substrate on which the picture elements are mounted, are in the space between adjacent picture elements, and said separator overlies the electrical drive. Takizawa does not disclose such an arrangement of elements.

As for claim 114, Takizawa does not disclose a mask between respective groups of volumes of liquid crystal and also in overlying relation with respect to the substrate and between respective drive elements. As was discussed above, the resin 23 of Takizawa is not a mask as claimed in claims 106 or 114. Rather, the resin 23 is used to bound the volumes of liquid crystal 22 to form PDLC or NCAP material.

In view of the foregoing, it is submitted that claims 106, 114, 115 and 122 are not anticipated by Takizawa.

For the reasons above, in addition to the allowance and allowability of claims 116, 120, 121, and 123-125, it is believed that claims 106, 114, 115, 117-119, and 122 are allowable.

Therefore, this application is believed in condition for allowance, and early action to that end earnestly is solicited. If Examiner Tran feels that a telephone interview would be helpful to expedite favorable consideration of this patent application, he is invited to telephone applicant's undersigned attorney at the telephone number below.

Respectfully submitted,
RENNER, OTTO, BOISSELLE & SKLAR, LLP

DATE: 2/4/02

Warren A. Sklar
Warren A. Sklar, Registration No. 26,373

The Keith Building
1621 Euclid Avenue
Nineteenth Floor
Cleveland, Ohio 44115
(216) 621-1113

APPENDIX A

Following is a marked-up version of amended claim 106, with added material underlined, and with removed material in brackets.

106. (Amended) A liquid crystal display, comprising
plural liquid crystal picture elements selectively operable to affect light by
scattering or absorbing light or by reducing such scattering or absorption of light, and
a separator integral with and between respective picture elements,
said separator being substantially non-selectively operable to affect light,
[The display of claim 1,] said separator comprising spacer means between
respective picture elements forming a grid of spacers and picture elements,
plural electrical drive means in spaced relation for selectively applying electrical
input to respective picture elements,
said spacer means being located in relation to the space between
respective electrical drive means.